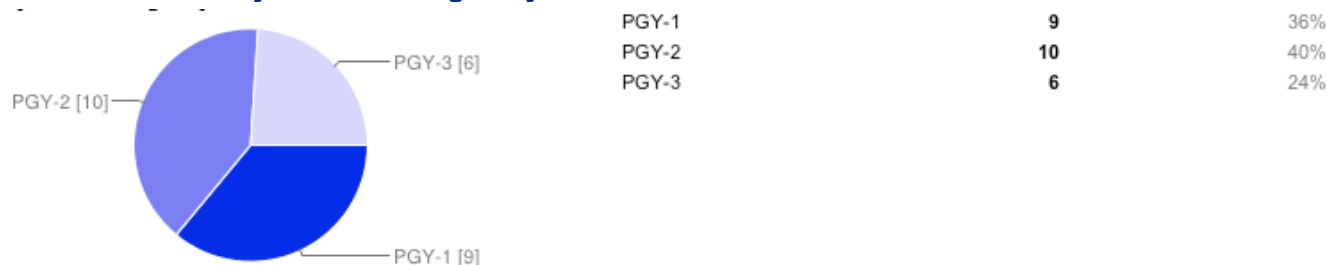


## Summary: Survey of Possible Solutions for Night Resident Stress

Data Collected August 19 to August 25, 2012

The purpose of this survey was to understand Resident attitudes about the need to reduce workload stress on Resident Night Teams and to gauge receptiveness to one possible solution: faculty attending staffed at night. The response rate of this survey was moderate at 59.5 percent (n = 25). First and second-year Residents had almost equal response rates (64 and 71 percent respectively). Third-year Residents had the lowest response rate at 43 percent.

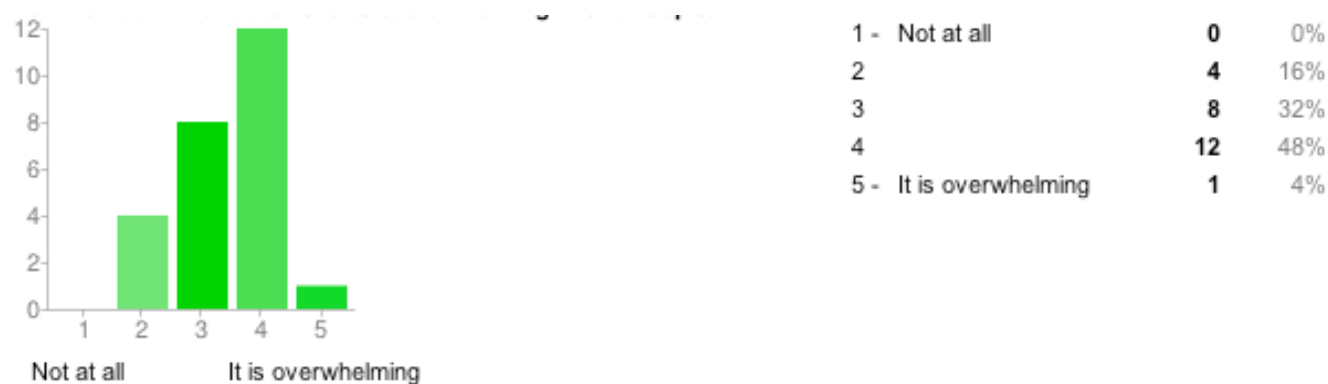
### Question: In what year of training are you?



## Hospital Stress and ccLink

Using a Likert scale, Residents were asked about their perception of how ccLink has affected their level of stress in the hospital. All agreed that ccLink increased stress at least some. Eighty-four percent believed that ccLink increased stress to at least a moderate degree. Over half (52%) felt the impact was large.

### Question: How has ccLink affected the stress of working in the hospital?



## Factors Affecting Stress

Analysis of the data seem to indicate that stress factors could be divided into two main categories:

- **Factors within the Resident Control:** That is, factors affected by the Residents' own abilities, both as clinicians, as well as their ability to navigate the new computer system. These should improve over time.

- **Factors outside of Resident Control:** These would be factors that affect how Residents work, such as quality of work upstream of Residents, bottlenecking of workflow by others not facile with ccLink (e.g., other clinicians, triage nurses, laboratory, etc.). Improvement in these areas should hasten with better training of staff, increased familiarity within ccLink, and quality improvement initiatives within the hospital.

Discussed below are some factors found to be significant to the Residents:

#### *Medication Reconciliation*

Again using the Likert scale (1 = Not a factor; 5 = Large Factor), Residents were again queried about factors influencing that stress. Eighty-four percent (n = 21) believed that incompletely or incorrectly reconciled medications was at least a moderate factor (Scale  $\geq 3$ ) while forty-four percent (n = 11) felt it to be a significant factor in hospital stress (Scale  $\geq 4$ ).

#### *Need for Additional Patient Workup*

Most Residents felt that at the time of Emergency Department bed request, incomplete patient evaluations (i.e., crucial information needed to safely admit the patient was missing) were a factor in slowing down the speed of admissions. Only eight percent (n = 2) of respondents felt that this was NOT a factor. Ninety-two percent of Residents felt this played a role in speed of admissions in ccLink. Sixty percent (n = 15 responding  $\geq 4$ ) believed this to be a moderately large to large factor affecting speed of admissions.

#### *Resident Facility with ccLink*

Eighty-four percent of Residents felt that speed of Admissions was adversely affected by their own lack of familiarity with ccLink. Sixty-four percent (n = 16) believed this to be at least a moderate factor. Double-work in terms of error correction led 88 percent of Residents (n = 22) to cite that as at least a small factor in how quickly they could do admissions. Ninety-six percent (n = 24) believed that a poorly-designed system played at least a small role in how efficiently Residents could complete an admission. Almost two-thirds (64 percent, n = 16) believed that ccLink's design was a moderately-large to large factor in how efficiently they could work.

Typing speed was not a major factor for completing admissions in ccLink. Only 2 residents cited that as an obstacle to completing work.

#### *Other Factors*

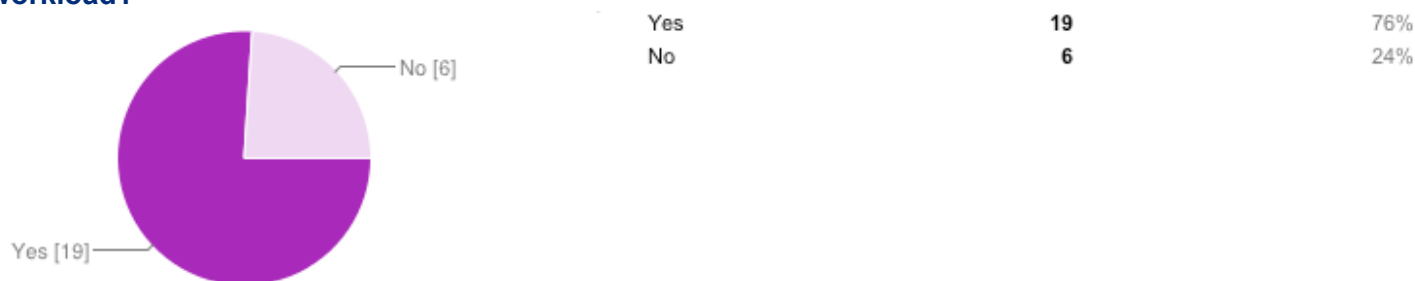
Residents were offered the opportunity for free response for other factors affecting how admissions had been affected in ccLink:

- **Laboratory Data:** Assuring collection of all relevant laboratory data by toggling back and forth between ccLink and Meditech adversely affected efficiency
- **Order Sets:** Because of technical problems with merging Order Sets, at Go-Live Order Set merging was disabled. Residents stated that having to open one order set at a time was time consuming, and at worst, dangerous for patient safety because of increased risk of forgetting to add an order set.
- **Sign & Hold Orders:** Residents cited these as getting lost between the Emergency Department and the Floor, causing Residents to go back and fix them.

## Possible Solutions to Reduce Stress

Residents overwhelmingly felt that some additional support was needed at night. Third-year Residents was the group overwhelmingly against the idea of additional support (66 percent opposed). In contrast, Second-year Residents were unanimously in favor of the proposal, while First-year Residents were 89 percent in favor (8 of 9).

**Question: Is additional support needed for Night Resident Teams to safely cope with the admission workload?**



Residents were asked to rate on a Likert scale some possible solutions to alleviate night stress. Automatic callback was felt to be helpful by most Residents (68 percent,  $n = 17$ ), rating this idea at least four (1 = this is not helpful, 5 = this is very helpful). 20 percent were neutral to this idea. Second callback was less popular with 28 percent neutral, and 28 percent feeling this would be at least helpful ( $n = 7$ ). Fifty-six percent of Residents felt that a Nocturnist would be helpful for alleviating stress ( $n = 14$ ), with 20 neutral ( $n = 5$ ) and 24 percent opposed ( $n = 6$ ). Interestingly, amongst Third-Year Residents, 66 percent ( $n = 4$ ) were opposed to the idea of a Nocturnist.

Even those opposed to the idea of a Nocturnist did not believe it would harm their education. Only 16 percent ( $n = 4$ ) felt it would detract from their education. Fifty-two percent ( $n = 13$ ) believed it would improve education, while about a third ( $n = 8$ ) believed it would have no effect.

**Question: How would a Nocturnist affect your educational experience on Nights?**



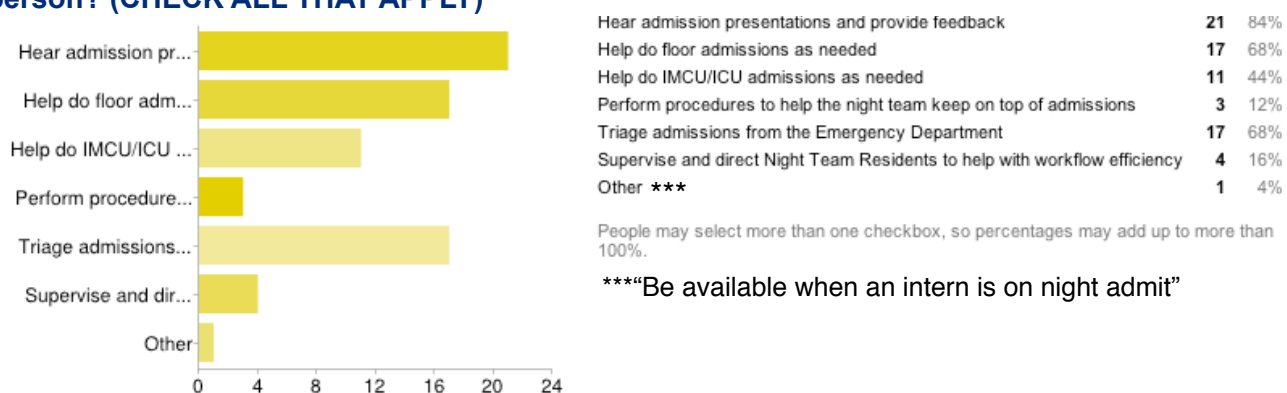
## Defining the Nocturnist

In terms of defining the role of this faculty, the most popular responses were:

- Hear admission presentations and provide feedback
- Help do floor admissions as needed
- Help do IMCU/ICU admissions as needed
- Triage admissions from the Emergency Department

Very few residents were in favor of having that faculty supervise and direct Residents at night to improve workflow, or doing procedures when admissions were backed up.

### If a Nocturnist were provided to help the Night Resident Team, what should be the role of that person? (CHECK ALL THAT APPLY)



Amongst those who left comments, most were in agreement that Resident independence on nights was an important aspect of their education.

A PGY-3 opposed to a Nocturnist said the following:

Part of our learning and what makes us great docs here is being able to work on our own at night in the ICU, and being forced to make decisions - take initiative in caring for patients, manage complicated situations, etc. I think having an attending in house would take away from our independence.

A PGY-1 in favor of a Nocturnist nevertheless echoed the desire for Resident-driven nights:

As a first year, I feel I have much to learn in terms of medicine and the actual practice of medicine. In my experience, I feel that the night team members are quite busy with their own work. When I ask them questions, they are happy to help, but there often is not a lot of teaching. I feel I have been getting by, but I'd love for the whole experience to be more educational. Having an attending there 8-8 would be awesome as long as we clearly define their role[...] The ICU resident should still be "in charge" of the night team[...]

A PGY-2 in favor of a Nocturnist also expressed a similar sentiment:

I think the autonomy of residents at night is important to protect - the night attending should not direct workflow and should take a backseat role unless asked to help. I learn much more when presenting to an attending who has no other responsibilities than to other residents who may be inundated with additional work

Staffing the Nocturnist

Finally, Resident were asked when they thought would be the most useful time to have faculty staffed at Night. Most chose the “Swing shift,” defined as 5 to 11 pm. They may be consistent with getting support during the busiest time at the hospital, while also preserving the independence that Residents value on the night shift.

Given that a Nocturnist would be present, when would that person be most needed?

